



Kids in Parks



*Designing Self-guided Trails
that Get Kids in Parks*

Parks and Trails are Underutilized



In 2007 and 2008, the Blue Ridge Parkway conducted a Visitor Use Study and determined that only 7-12% of visitors to the Blue Ridge Parkway brought kids under the age of 15 with them.

Kids are Plugged-in



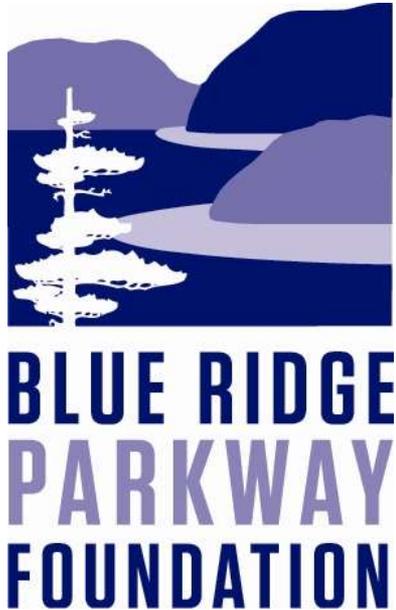
Kids spend an average of 7.65 hours per day plugged-in to electronic media.

Disturbing Health Impacts



A myriad of negative health effects have been linked to sedentary lifestyles, including: childhood obesity, hypertension, asthma, depression, ADD/ADHD, and more.

Founding Partners



An independent licensee of the Blue Cross and Blue Shield Association

In 2008, the Blue Ridge Parkway (NPS), the Blue Ridge Parkway Foundation, and the Blue Cross and Blue Shield of North Carolina Foundation partnered to form the Kids in Parks program, a program designed to get kids and families to utilize the trails on the Parkway for both their health and the health of our park.

With Guided Programs?



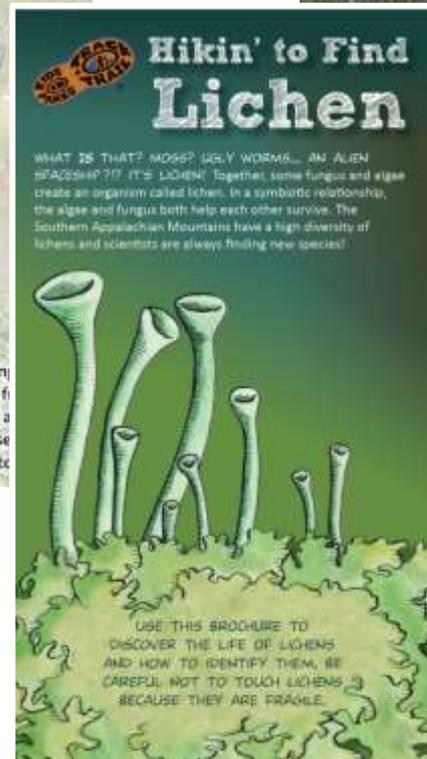
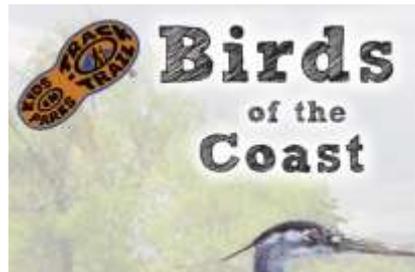
Only 4-8% of Parkway visitors reported attending ranger-led programs – YIKES!
Budgetary restrictions and reduced staffing levels forced an alternative approach.

Introducing TRACK Trails



Kids in Parks provides a network of self-guided, brochure-led hiking trails designed for kids and their families called TRACK Trails.

Brochure-Led Discoveries



Each TRACK Trail trailhead has 4 different self-guided, brochure-led adventures. Brochures are used because they're cost effective per visitor contact, available 24 hours per day, provide take-home value, and are the most preferred and used form of visitor information.

Network of Trail Opportunities

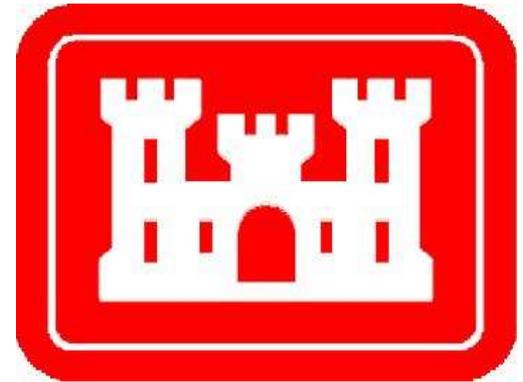


www.KidsInParks.com



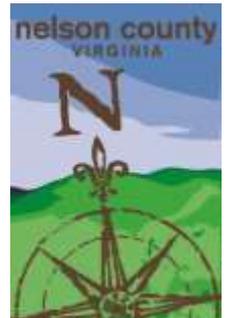
TRACK Trail locations are networked through the Kids in Parks program's website. Various social media outlets are used to connect users with trails and the program.

Linking Public Lands



Kids in Parks has been able to cross agency boundaries and link various types of parks and public lands.

Connect Community Partners



City/county parks departments, schools, universities, pediatrician offices, hospitals, corporations, foundations, private donors, and other groups have joined the Kids in Parks network of community partners.

Various Types of Trails



Biking



Paddling



Citizen Science



Geocache

In an attempt to reach people of varying ages and interests, Kids in Parks has opened several TRACK Trails that utilize various forms of outdoor recreation.

Provides Incentives for Participation



Kids earn prizes for registering their adventures through the Kids in Parks website. In order to earn their prizes, kids answer 12-15 questions about their experience, providing Kids in Parks and their TRACK Trail partners with valuable data.

FUN!



Kids just want to have “FUN!”

Brief History

1st TRACK Trail – August, 2009



The first TRACK Trail opened on the Blue Ridge Parkway at the Asheville Visitor Center on August 29th, 2009.

Gateway Trails



In 2010, Kids in Parks began installing “Gateway Trails” in communities along the Blue Ridge Parkway, creating a network of trail opportunities for kids and families in the region. The first gateway trails were installed at Chimney Rock State Park and Pisgah National Forest.

Building The Network of Partners



**US Army Corps
of Engineers®**

The Kids in Parks program continued to expand their network of “Gateway Trails” into communities along the Parkway by installing TRACK Trails in City/County Parks, Virginia State Parks, an Army Corps site, and on schools and private property.

Proof of Concept

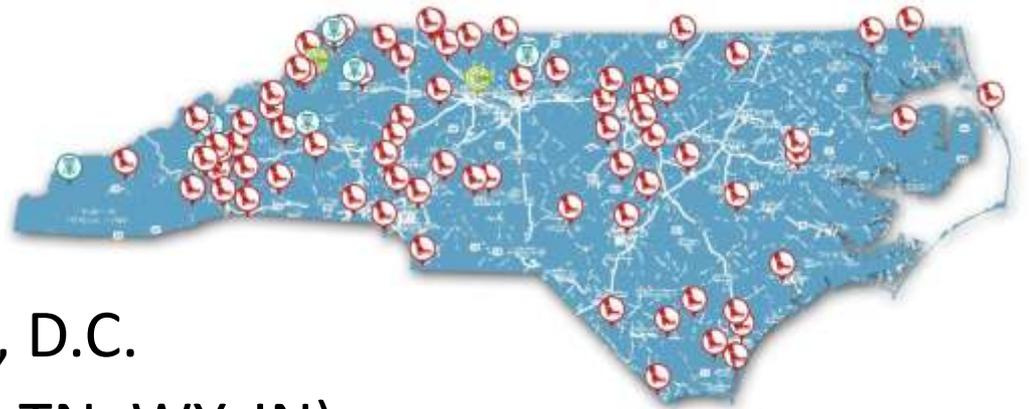


In 2011, KIP tested the program's "Proof of Concept" to determine if TRACK Trails could be easily replicated in any park in the United States.



TRACK Trail Growth by Year

2009 – 1 TRACK Trail
2010 – 5 TRACK Trails
2011 – 11 TRACK Trails
2012 – 40 TRACK Trails
2013 – 80 TRACK Trails
2014 – 106 TRACK Trails
2015 – 135 TRACK Trails
2016 – 148 TRACK Trails
2017 – 165 TRACK Trails
2018 – 166 TRACK Trails



In 10 States and Washington, D.C.

(NC, VA, SD, MD, WV, CA, SC, TN, WY, IN)

There's a TRACK Trail at the White House!



Results to Date

Health of Kids and Families

2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
53	217	259	278	568	1,501	2,312	2,808	4,140	12,136

as of 12/31/2017

Online registration data collected since 2009, in conjunction with several on-site observation studies conducted with local universities, suggests that:

400,000 kids have hiked TRACK Trails

410,000 miles have been hiked by kids on TRACK Trails

200,000 hours active outdoors by kids on TRACK Trails

60 million calories have been burned by kids on TRACK Trails

Kids don't come alone! The average group size is 3.43 people. When we add in the family members and friends who also hiked TRACK Trails, the overall health-based outcomes are even greater:

800,000 people / 820,000 miles / 410,000 hours / 120 million calories

Overall Park Health Data

The health of our parks and public lands are improving as well:

11% of KIP registrants were first-time hikers

54% of KIP registrants were first-time visitors to the park

52% intentionally visited the park to hike the TRACK Trail

47% returned for a second adventure (Return Rate)

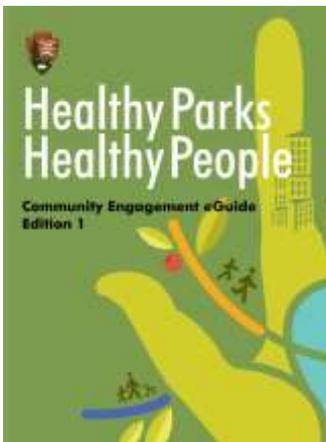
88% of returnees visited more than one TRACK Trail



Endorsements and Awards

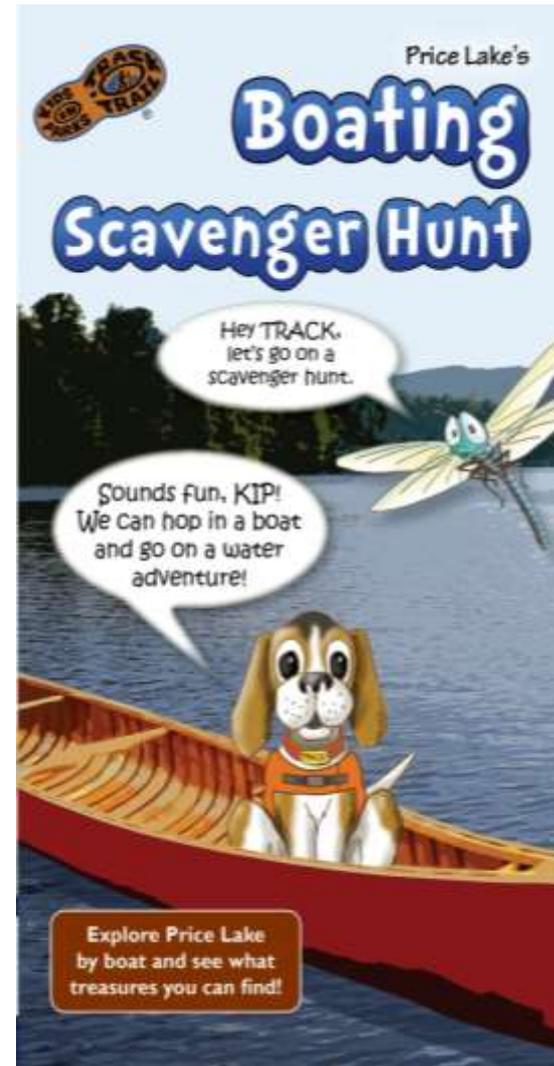


In 2012, Kids in Parks earned the “Let’s Move! Champions of Change” Award from the White House. The program has also been endorsed by the American Academy of Pediatrics, highlighted in the NPS HPHP catalog, mentioned in a report released by the U.S. Surgeon General, reviewed as a “practice-tested intervention” by the Center for TRT, and earned an Outstanding Public Engagement Award from the APPL.



Designing Self-Guided Kid Friendly Materials

Use Mascots



The Kids in Parks program uses two mascots (TRACK the dog and KIP the dragonfly) that lead many of the brochure-led activities.

3-30-3 Rule

~ 3 second message

~ 30 second message

~ 3 minute messages

Lichen, it's a Lifestyle

Although lichens are diverse, lichens can be found in three major forms. CHECK the box next to each LICHEN FORM YOU FIND ON YOUR HIKE.

# of Lichens	0	1-4	5-8	10-15	16-20	20-30	30-50	50+
Crustose								
Foliose								
Fruticose								

Sensitive Species
Lichens get their food from light, air and rain so they are easily damaged by pollutants in the air. Scientists study lichens to learn about air pollution. The healthier the air, the more species of lichens there will be. 1) On your hike, count how many different lichens you can find. 2) Based on your findings, would you consider the area to have good or bad air quality?

Crustose

Crustose lichens are thin like crust. The lichen's edges stay flat against the object it is growing on. Crustose lichens grow slowly and some are among the oldest living organisms on Earth!

Porpidia
Porpidia cf. adhaerens

Many lichens don't have a common name. What would you name this lichen?

Wet Lichen
Wet Lichen

Gold Dust Lichen
Chlorenchium aureolum

Foliose

Foliose lichens look like dry, waxy **foliage** (leaves). The edges curl off the surface the lichen is growing on.

Punctelia
Punctelia subulnaria

Powdered Ruffle Lichen
Porcinaria Apollinarum
Look for little black spots (sclerotia)

Lungwort Lichen
Lobelia pulmonaria

Fruticose

Fruticose lichens are the most three-dimensional lichens. Some look like mini fruit trees without leaves while others hang down from branches like hair.

Barricade
Barricade

What would you name this lichen?

Cup Lichen
Culmella ciliatocarpa

Old Man's Beard
Ulex europaeus

Lichens come in many shapes, sizes and... colors!
What colors of lichens can you find?

Tiny Pioneers

Crustose lichens are nature's pioneers because they can grow in places that are too extreme for most other organisms. Severe heat, cold and drought are no match for lichens because lichens are able to go dormant, or "turn off," during harsh conditions. What kind of surfaces can you find lichens growing on that plants are not growing on?

Leading the Way

Without lichens, plants may not grow in some places. Lichens are often the first to grow in a disturbed area. Over time, lichens are able to break down rock and produce thin layers of soil. More complex lichens, mosses and flowering plants are then able to take root. Find a community of lichens and describe the layers of lichens you see.

Lichens, The Next Frontier

Most questions about basic lichen biology remain unknown. The real mystery begins when lichens are studied under a microscope. Will you be the next scientist to make a lichen discovery?



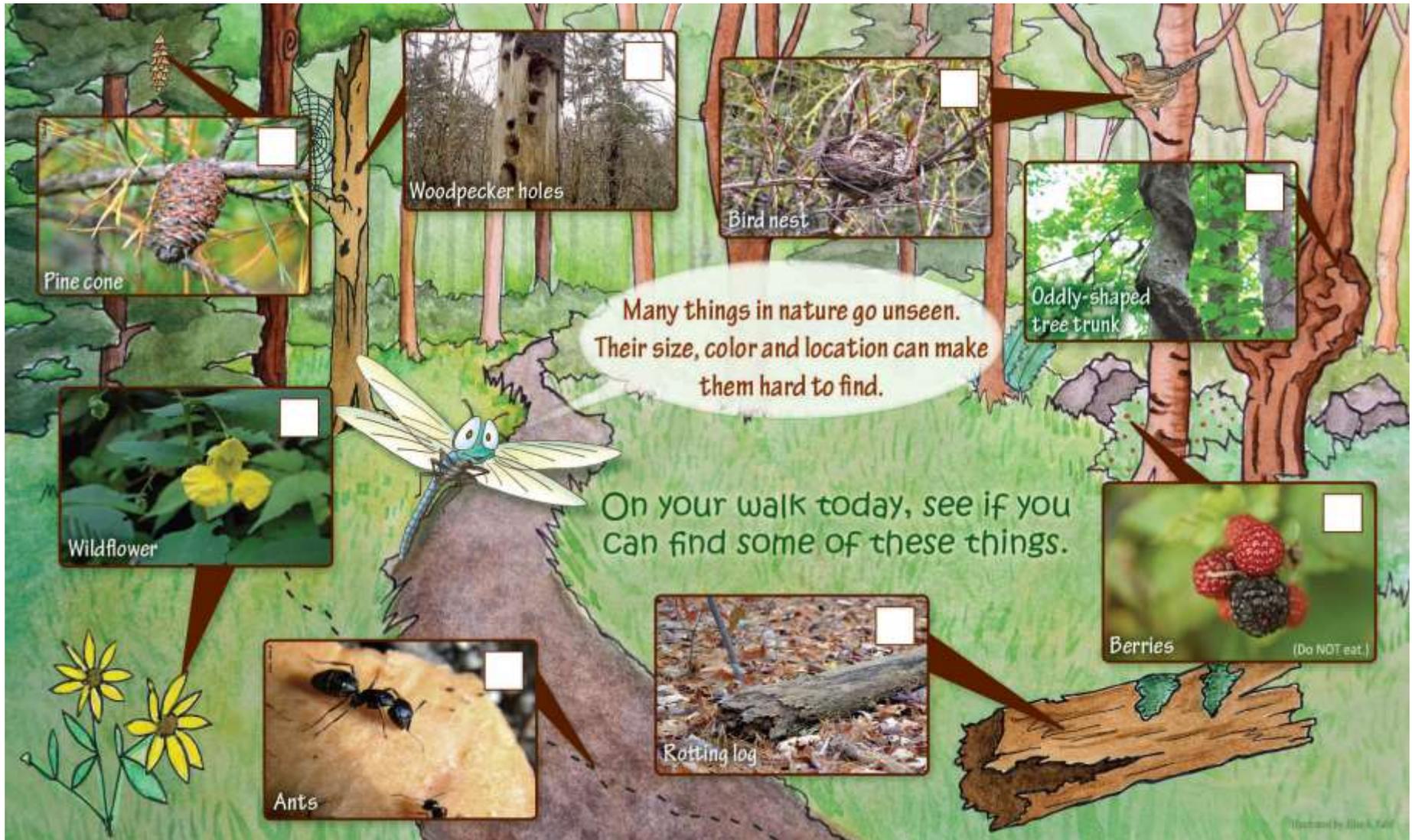
Hikin' to Find Lichen

WHAT IS THAT? MOSS? UGLY WORMS... AN ALIEN SPACESHIP ??? IT'S LICHEN! Together, some fungus and algae create an organism called lichen. In a symbiotic relationship, the algae and fungus both help each other survive. The Southern Appalachian Mountains have a high diversity of lichens and scientists are always finding new species!



USE THIS BROCHURE TO DISCOVER THE LIFE OF LICHENS AND HOW TO IDENTIFY THEM. BE CAREFUL NOT TO TOUCH LICHENS BECAUSE THEY ARE FRAGILE.

Use Bright Colors



This brochure was designed for younger kids.

Use bright, saturated colors. Illustrations mixed with pictures. Limited text.

Count Words

☐ Hummingbird Hand-swings

Look for ruby-throated hummingbirds feeding on flowers around woodland edges and fields. Hummingbirds flap their wings over 50 times per second! 50 wing-beats per second equals 1500 wing-beats in 30 seconds.



How many times can you flap your "wings" in 30 seconds?

☐ Ant Strength Training

Ants are very strong insects, able to lift objects much heavier than their own bodies. Can you lift your own body weight? An easy way to find out is by doing push-ups.



Find a clear, safe spot on the trail and see how many push-ups you can do!

☐ White-tailed High Jump

Keep your eyes and ears open for white-tailed deer in the woods and meadows. In order to move quickly through the tall grasses and shrubs, white-tailed deer leap very high —sometimes over 6 feet in the air!



How high can you leap straight up in the air?

☐ Green Frog Hop

Listen for the "gunk!" sound of the green frog around ponds and streams. Green frogs make a tasty snack for predators such as snakes and herons. To escape quickly, frogs use their strong back legs to hop away.



Pretend you're being chased by a predator and hop like a frog down the trail.

☐ Hawk Stance

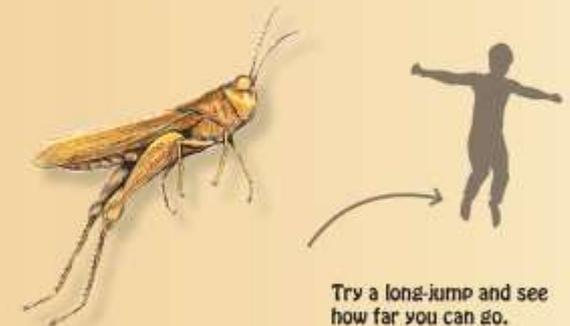
To conserve heat and energy, birds of prey such as sharp-shinned hawks often perch on one leg. Locking tendons in their feet allow birds to balance on one leg for hours at a time.



Stand on the edge of the trail and see how long you can balance on one leg.

☐ Grasshopper Long Jump

You may glimpse grasshoppers in areas with short grass or gravel. Grasshoppers can jump 20 times the length of their own body. If you could do that, you would be able to jump almost 100 feet!



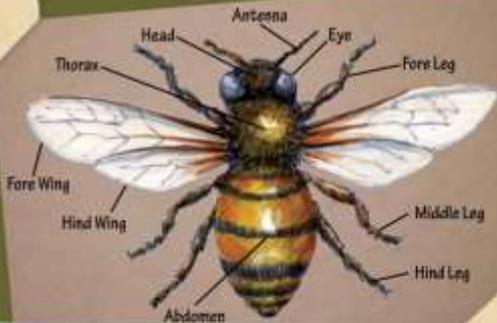
Try a long-jump and see how far you can go.

This brochure encourages kids to mimic animal movements and exercise on their hike. *People don't like to read. Try to keep your word count to 50 words or less per text block.*

Group Information

Insects

With over a million different species, insects are an extremely diverse group of animals. All insects, no matter how different their size or shape, have a three-part body with six legs.



The body of a honeybee is like that of most insects.

All insects have...

- ... a **head** with two antennae, compound eyes and mouth parts
- ... a **thorax** with six jointed legs and, if present, 2 or 4 wings
- ... an **abdomen** with respiratory, reproductive and digestive organs
- ... a hard, external skeleton called an **exoskeleton**



What is an Exoskeleton?

Instead of having a skeleton on the inside of their bodies, insects have their skeleton on the outside. A hard exoskeleton protects an insect like a knight's suit of armor.



How many of these different insects can you find today?



Spiders

look similar to insects, but they are actually different.



Spiders have a hard exoskeleton, but instead of a three-part body, they have a two-part body made up of the cephalothorax and abdomen. Spiders also have eight legs, pedipalps, venom injecting fangs, and web-making spinnerets.

Other Arthropods

Insects, spiders and crustaceans are all arthropods. Arthropods are a group of creatures that make up about 85% of all living things on Earth. They can be identified by their exoskeleton, segmented bodies, and jointed legs.

Millipedes, centipedes, pillbugs (rolly-polies), and harvestmen are commonly considered bugs. However, unlike their insect and spider cousins, they can have more body segments, legs, or even extra features like claws. Some are harmless critters like millipedes, pillbugs and harvestmen, while others can cause harm, like venomous centipedes and scorpions.



Can you spot any of these bug homes?

Bugs have different ways of sheltering themselves from predators or weather. Or they can even use their homes as traps for food. CAUTION: Many bugs will defend their homes by biting and stinging. Look from a distance and DO NOT disturb them.



This brochure teaches kids about insects, spiders and other “bugs”.
Think about the proximity of information and graphically grouping information.

Break Borders

Songs from the Wood Check the box next to each tree you find on your hike.

the Face (front)

The face of the instrument vibrates and transmits sound like a speaker. For the best sound, a soft wood needs to be used. In the Blue Ridge Mountains, red spruce is the best choice. If red spruce cannot be found, white pine can be used instead.

Red Spruce

Red spruce is an evergreen that grows at higher elevations. Red spruce trees have short needles with sharp points that branch out from all sides of the twig. Look for round cones that are a little larger than an egg.



White Pine

White pine is an evergreen tree with long needles in bundles (fascicles) of five. The cones are long and thin. The tree trunk is straight.



the Sides and Back

When a string is plucked, sound waves travel down inside the instrument. For the best sound, a hard wood is needed to reflect the sound back out through the face of the instrument.



Sugar Maple

Sugar maple has been the favorite hard wood for the back and sides of stringed instruments in the Blue Ridge Mountains for years.

The sugar maple leaf looks like a hand with five fingers. They have winged seeds, called samaras, that spin as they fall from the tree.

Mandolin

the Fingerboard

The fingerboard is a thin piece of hard wood that is glued to the front of the neck. Because the metal strings would dig into a softer wood over time, an extremely hardwood, like dogwood, needs to be used.

Dogwood

Dogwood bark looks like a worn checkerboard with crooked squares. In spring, dogwoods have yellow flowers with four white modified leaves, called bracts.



the Neck

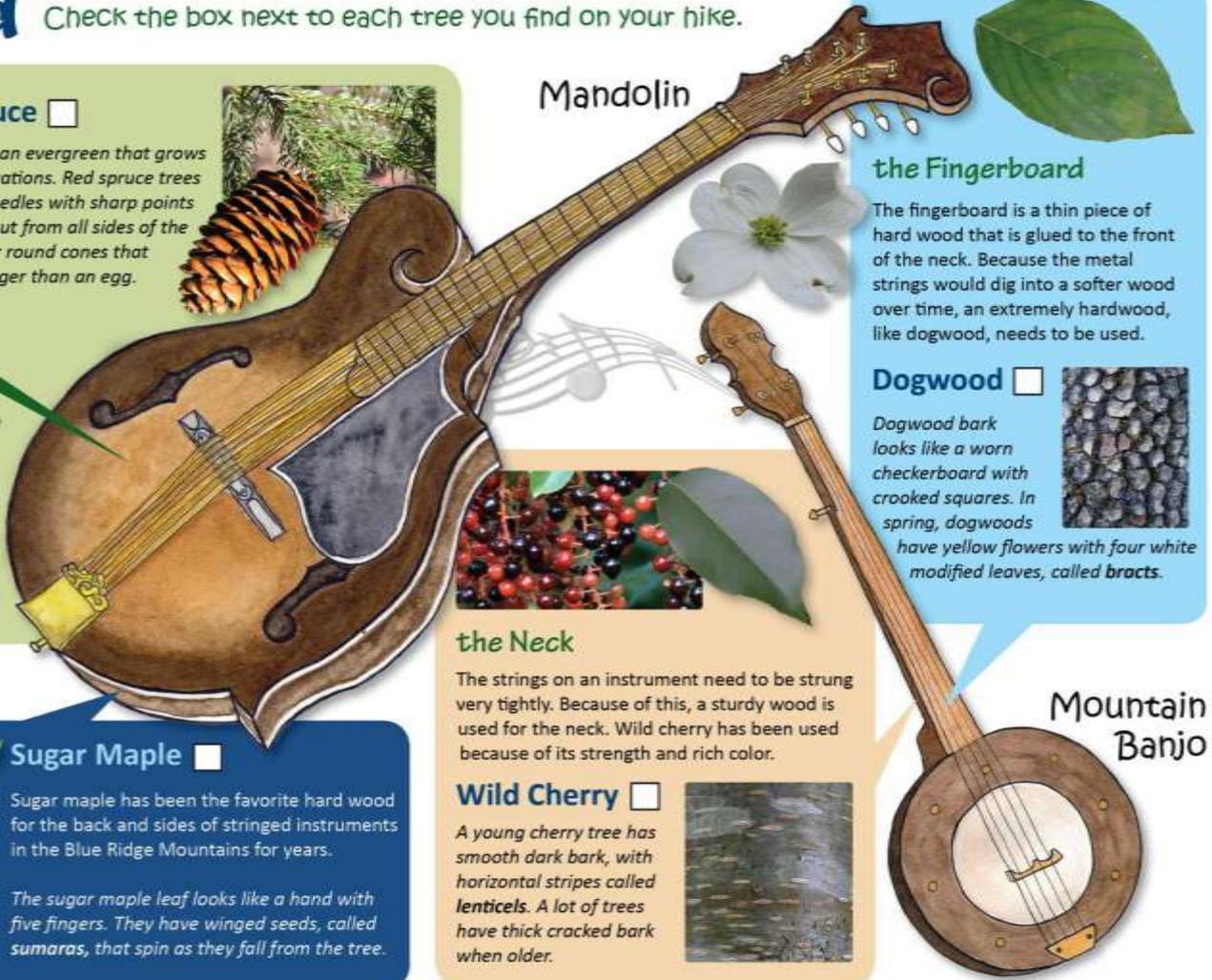
The strings on an instrument need to be strung very tightly. Because of this, a sturdy wood is used for the neck. Wild cherry has been used because of its strength and rich color.

Wild Cherry

A young cherry tree has smooth dark bark, with horizontal stripes called lenticels. A lot of trees have thick cracked bark when older.



Mountain Banjo



This brochure teaches kids how trees found along the trail are used to make instruments. *Break the borders with your graphics.*

Align Features

Discover treasures in Constitution Gardens

History and nature can be found together here in Constitution Gardens. Follow along the trail and discover just a few of the stories this park has to tell.

Vietnam Women's Memorial



To the north of the trail through the trees you can see a bronze statue of three nurses caring for a wounded soldier. This memorial honors the thousands of women who served their country during the Vietnam War. Eight yellowwood trees are planted around the memorial to recognize the eight women who died during the war. Can you count all eight trees?

American Yellowwood



The American yellowwood is a small tree native to parts of Tennessee, Kentucky, and Arkansas. It has smooth, grey bark and **compound leaves** (many leaflets on one stem). In late spring, yellowwood trees bloom with fragrant white and pink flowers.

Weeping Willow



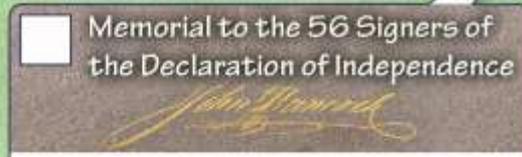
Originally from China, weeping willow trees grow near water and can reach heights of 50 feet. The skinny leaves that hang down on branches look like tears falling, giving the tree its name. Stand by a weeping willow, close your eyes and listen to the tree. Describe what you hear.

Mallard Duck



To attract a mate, the male mallard has a shiny green head and neck. The female is camouflaged to protect her nest from predators. She can raise up to a dozen chicks at one time! How many mallards do you see swimming in the pond?

Memorial to the 56 Signers of the Declaration of Independence



In the summer of 1776, fifty-six people came together to unite our country and move towards a new beginning by signing the Declaration of Independence. Read part of the Declaration below and sign your "John Hancock".

"...We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness..."

Lock Keeper's House



Boats used to travel up and down a canal that followed the same path as Constitution Avenue. The Lock Keeper's House operated similar to a modern day traffic light, controlling the movement of boats along the canal. What year does the plaque on the house say it was built?



The map shows a red dotted trail winding through Constitution Gardens. Landmarks include the Vietnam Women's Memorial, the Lock Keeper's House, the Memorial to the 56 Signers, and the Weeping Willow. A pond is located near the Lock Keeper's House. The map also shows Constitution Avenue, 23rd Street, and The Street. A dog is shown at the bottom left of the map area.

Designed and Illustrated by Day A. Kell

Site specific brochures are a great way to connect kids with specific locations along the trail. *Align text blocks, gator boxes, titles, etc. for a cleaner look.*

Make it Interactive

Flowers Attract Pollinators

Use the clues in this brochure to see how a flower's size, shape, color and smell have the power to attract unique pollinators.

Nature's Color Palette

Certain colors attract certain kinds of pollinators. How many colors of flowers can you find?



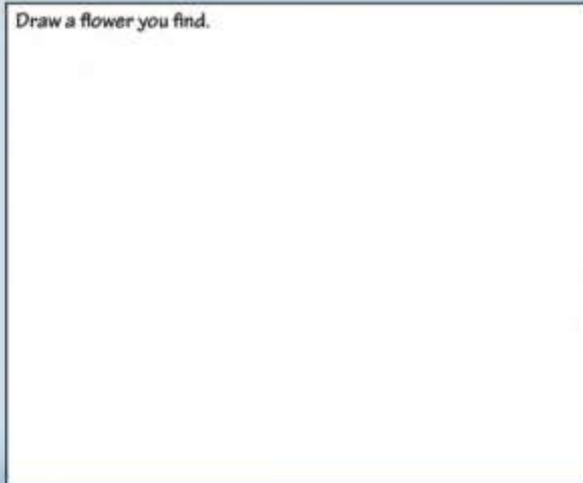
What flower color are you attracted to? _____

Petal Persuasion

Like a billboard that can catch a person's attention, petals are used to attract pollinators to a flower. The petals' smell and shape depends on its pollinators' feeding and landing preferences. Look for pinwheel, cup, and trumpet shapes.

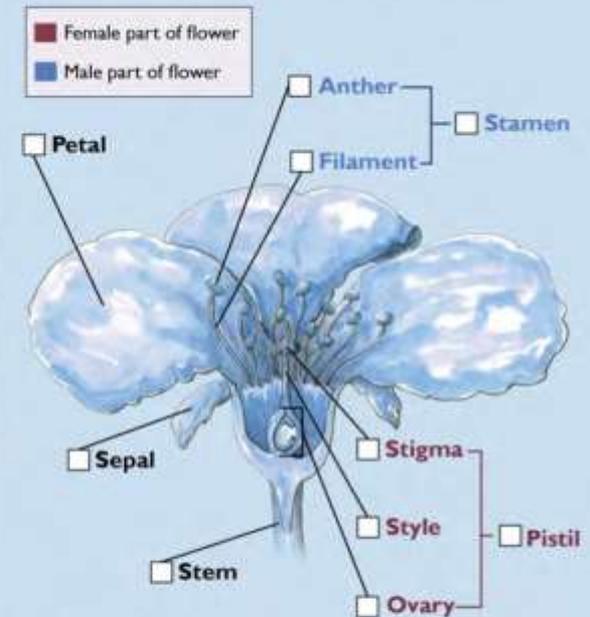


Draw a flower you find.



Parts of a Flower

Flowers come in many different shapes and sizes, but they all have the same basic parts. Look closely at a flower and see how many of its parts you can find.



The Need for Pollinators

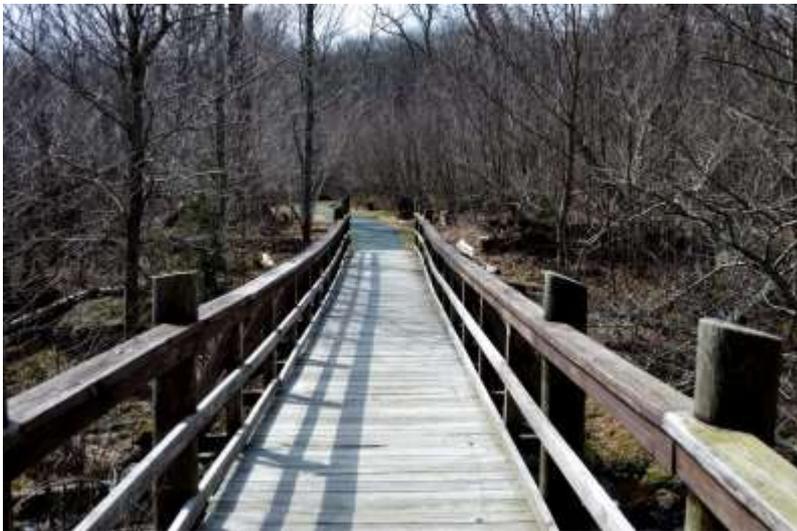
Pollinators and the flowering plants that need them are both important to humans. More than 180,000 different plant species need pollinators, including many that produce fruits, vegetables, and nuts. Did you know that one out of every three bites of food you eat is there because of pollinators?



Check boxes, sketch boxes, open ended questions, games, and other activities help make your brochure interactive and keep users engaged.

Steps to Designing a Brochure

Site Visit



Walk the trail with the staff to determine stops, topics, and potential points of interest for kids and families.

Determine Your SAP

S - Subject
A - Audience
P - Purpose

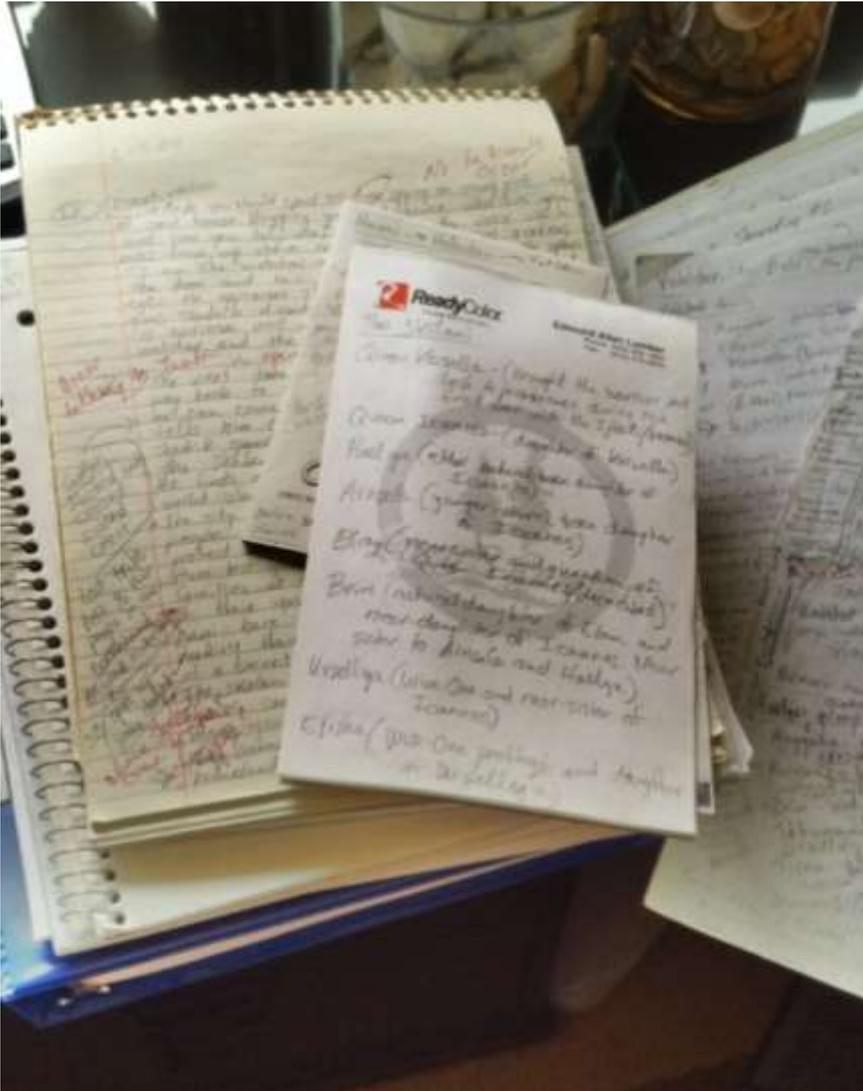


What is the self-guided trail going to be about? Natural resources, history, culture, etc.

Who is your target audience? Age range, visitors, locals, special needs, etc.

What is the purpose of your trail? Education, interpretation, citizen science, etc.

Research



Compile research about the various topics identified during the site visit. Conduct another site visit to determine if anything of interest may have been missed.

Text Writing

COVER

Just like the animals that live in this forest, people can use their senses to learn about their environment. Humans have five major senses that we depend on – sight, hearing, touch, smell, and taste. Use your senses and your creativity to discover what this forest is like for ~~a few of~~ the plants and animals that live here.

Activities

Box Turtle

Imagine ~~what would it would~~ be like to live an inch off the ground?! Box turtles are omnivorous, meaning they will eat just about anything – from fruits to mushrooms to plants. Get down on all fours, and with your chin almost touching the ground, look around. What do you see, smell or feel that you didn't notice before? _____ What ~~do~~ do you see anything a box turtle might eat? _____

Deer

Whitetail deer call this forest and most of Shenandoah home. They find many different kinds of food in the forest and use the trees to hide from predators. A deer's big ears catch sound like a baseball glove catches a ball. Cup your hands and make deer ears. What can you hear around you? _____ Can you hear better with bigger "deer ears"? How do large ears help a deer survive? _____

(possibly add a sound map)

Life on a rock

Rock surfaces can be mini-worlds unto themselves! Check out these rocks. How many different things are on the rock? Look for different colors, shapes and forms, and growth patterns to help identify the differences. _____ Gently touch the lichens and feel the mosses. How do they feel? _____ Is the rock habitat warm, cool, dry, or moist? _____ What would it be like to be a small insect and live on this rock? _____

The themes, subthemes, and potential activities / stops should help drive the text writing process. Text should be written prior to graphics being created.

Draft Mock-Up

“If I was an animal living at Shenandoah National Park...”

Use your senses and your creativity to discover what this forest is like for the plants and animals that live here. Activities can be done anywhere on the trail except the two that are labeled on the map.

Box Turtle

Imagine what it would be like to live an inch off the ground! Box turtles are omnivorous, meaning they will eat just about anything – from fruits to mushrooms to plants. Get down on all fours, and with your chin almost touching the ground, look around. What do you see, smell or feel that you didn't notice before? _____
What do you see anything a box turtle might eat? _____

Bear's Nose

Black bears have a strong sense of smell. Find a comfortable spot and smell everything around you. How many different smells do you smell? _____
With your eyes closed breathe in deeply through your nose. Now what do you smell? _____
Which direction is each smell coming from? _____
If you were a bear, how would you use your sense of smell? _____

Life On A Rock

Rock surfaces can be mini-worlds unto themselves! Check out these rocks. How many different things are on the rock? Look for different colors, shapes and forms, and growth patterns to help identify the differences. Gently touch the lichens and feel the mosses. How do they feel? Is the rock habitat warm, cool, dry, or moist? _____
What would it be like to be a small insect and live on this rock? _____

Squirrel Climber

With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without trampling any plants on the ground. Look at the tree – its bark, limbs, leaves, color. Touch the tree – is it smooth, rough, slick, coarse, hard or soft? _____
Then, find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why? _____
* poison ivy warning

Snag

Nature is constantly changing. Decades ago this forest was shady, moist and cool year-round because it was filled with giant eastern hemlocks. An insect, called the woolly adelgid, was accidentally brought to North America and has killed most of the old hemlocks in Shenandoah. Look for “skeletons” of dead hemlock trees along the trail. There are still some young hemlocks that are growing, so maybe one day the hemlock forest will return. Draw a picture of what you think the forest will be like the next time you visit.



Create a draft mock-up to determine text size and general placement. You'll probably need to reduce the amount of text you have!

Advanced Mock-Up

Super Creative Title Here

Use your senses and your creativity to discover what this forest is like for the plants and animals that live here. Activities can be done anywhere on the trail except the two that are labeled on the map.

Map labels: Crescent Rock Trail, Rock Outcrop, Hemlock Snags, Hemlock Trail, Lumberjack Trail, Old Rag Fire Road, Horse Trail, trailhead, Shrike Cove.

Life On A Rock

Rock surfaces can be mini-worlds unto themselves! Check out the rock outcropping. How many different things are on the rock? Look for different colors, shapes and forms, and growth patterns to help identify the differences. Gently touch the lichens and feel the mosses. Circle the words that describe how the rock habitat feels.

warm cool dry moist

Describe what it would be like to be a small insect that lived on this rock. _____

image of moss

image of lichen

Box Turtle View

Imagine what it would be like to live an inch off the ground! Box turtles are omnivorous, meaning they will eat just about anything – from fruits to mushrooms to plants. Get down on all fours, and with your chin almost touching the ground, look around. What do you see, smell or feel that you didn't notice before?

Circle what you see that a box turtle might eat.

berry mushroom
leaf fern?

Bear's Nose

Black bears have a strong sense of smell. Fun fact about black bears. What can you smell around you?

Smell a leaf
 Smell a tree trunk
 Smell the ground

If you were a bear, what would you use your sense of smell for? _____

A Changing Forest

Nature is constantly changing. Decades ago this forest was shady, moist and cool year-round because it was filled with giant eastern hemlocks. An insect, called the woolly adelgid, was accidentally brought to North America and has killed most of the old hemlocks in Shenandoah. Look for "skeletons" of dead hemlock trees along the trail. There are still some young hemlocks that are growing, so maybe one day the hemlock forest will return. Can you find a young hemlock tree?

Eastern Hemlock

Squirrel Climber

With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without trampling any plants on the ground. Look at the tree – its bark, limbs, leaves, color. Touch the tree and circle the words that describe its trunk.

soft slick smooth
hard coarse rough

Find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why? _____

* poison ivy warning

Create a more advanced mock-up with tentative graphic concepts and placement. Approve advanced mock-up prior to having finalized illustrations completed.

Final Brochure

Explore Your Senses

Make your way through the forest relying on your senses of sight, smell, hearing, and touch to learn what life is like for the animals who live here. Discover how animals use their senses to find food, avoid predators, and navigate through the woods. The activities can be done anywhere on the trail except the two that are labeled on the map.

A map showing a network of trails: Crosscut Rock Trail, Life On A Rock, Moss, Lichen, A Changing Forest, Squirrel Climb, Old Rag Fire Road, and Horse Trail. A trailhead is marked with a 'P' and a 'SW' arrow. A river, the Rivanna River, flows through the forest.

Life On A Rock

Rock surfaces can be mini-worlds unto themselves! Check out the rock outcrop at the trail intersection near the bridge. How many living things do you see? Look for colors, shapes, forms, and growth patterns to help identify the differences. Gently touch the lichens and feel the mosses. Circle the words that describe how the rock habitat feels.

warm cool dry moist soft hard

Describe what it would be like to be a small insect that lives on this rock.

Box Turtle View

Imagine what it would be like to live an inch off the ground! Box turtles are omnivorous, meaning they will eat just about anything - from fruits to mushrooms to bugs. Get down on all fours, and with your chin almost touching the ground, look around. List three things that you see, smell, or feel that you didn't notice before.

1. _____
2. _____
3. _____

Bear's Nose

Black bears have a strong sense of smell. A bear's sense of smell is seven times better than a dog's. What can you smell around you?

Smell the air

Smell a leaf

Smell a tree trunk

If you were a bear, what would you use your sense of smell to do? _____

A Changing Forest

Nature is constantly changing. Decades ago this forest was shady, moist, and cool year-round because it was filled with giant eastern hemlock trees. An insect, called the woolly adelgid, was accidentally brought to North America and has killed most of the old hemlocks in Shenandoah. Look for snags and stumps of dead hemlock trees along the trail. There are still some young hemlocks growing, so one day the hemlock forest might return. Can you find a young hemlock tree?

Eastern Hemlock

Look for rounded needles and cones the size of nickels.

Squirrel Climb

With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without trampling any plants on the ground. Look at the tree - its bark, limbs, leaves, and color. Touch the tree and circle the words that describe its trunk.

Note: Poison ivy can climb up the trunks of trees... so if you see a hairy vine, don't hug that tree!

soft slick smooth

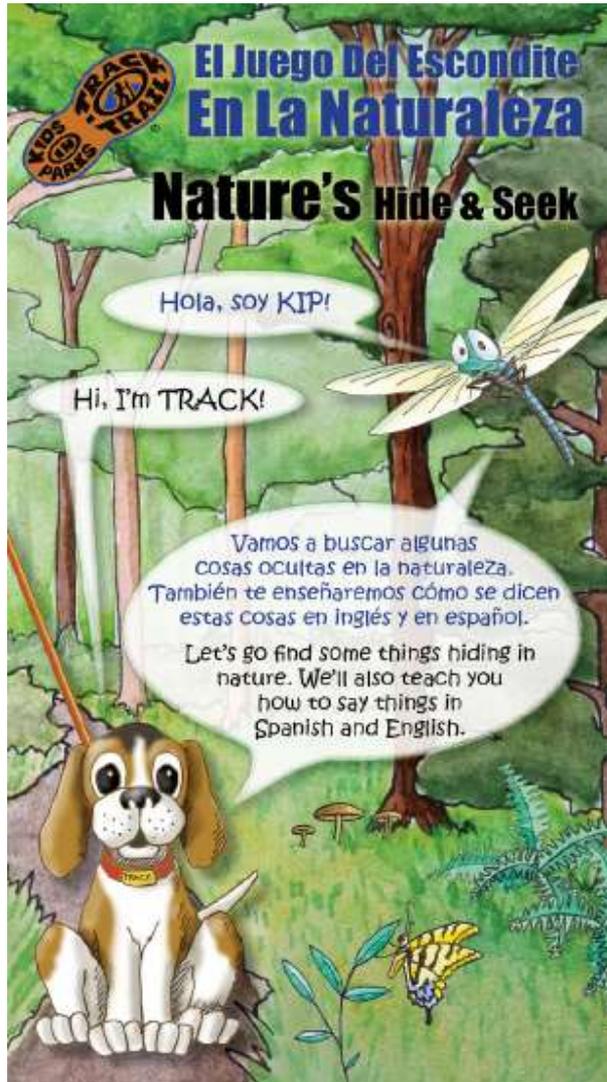
hard coarse rough

Find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why? _____

Finalize the brochure!

Designing Bilingual Brochures

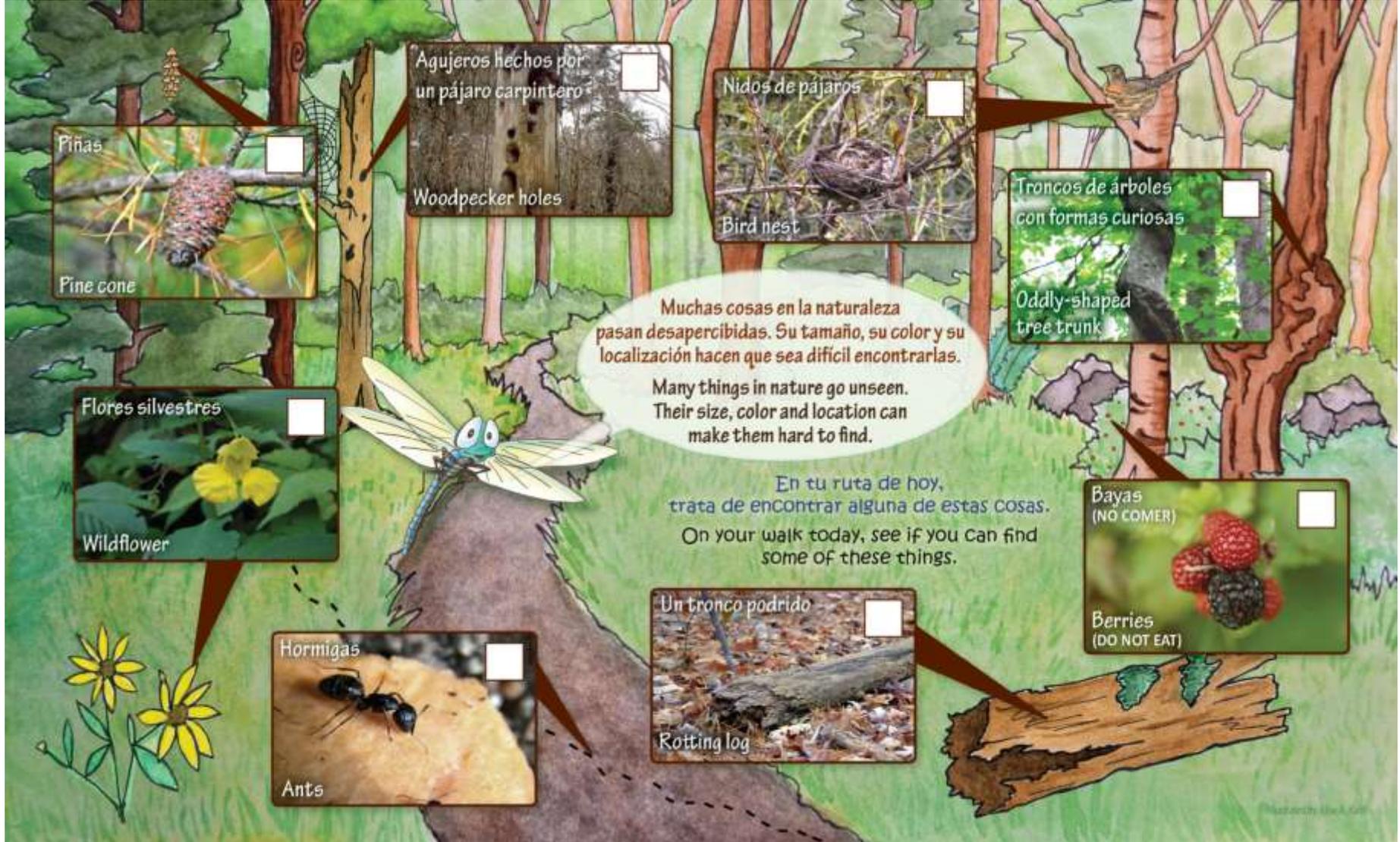
Bilingual Brochures



Work with a trusted source for your translation!

Use different colored text to differentiate which sections are for which readers.

El Juego de Escondite en la Naturaleza



This brochure allows users of either language to learn words in English and Spanish. *Keep the English and Spanish text in consistent locations for ease of use.*

Animales Atletas

Hummingbird Wing-flaps Los Aleteos del Colibri

Hummingbirds flap their wings over 50 times per second, or 1500 times every 30 seconds.

Los colibríes mueven sus alas alrededor de 50 veces por segundo, es decir, 1500 veces en 30 segundos.



How many wing-flaps can you do in 30 seconds?
¿Cuántas veces eres capaz de mover tus brazos como si fueran alas durante 30 segundos?

Ant Strength Training La Fuerza de una Hormiga

Ants can lift objects much heavier than their own bodies. Can you lift your own body weight?

Las hormigas son capaces de levantar objetos mucho más pesados que sus propios cuerpos. ¿Puedes levantar el peso de tu propio cuerpo?



Find a safe spot and see how many push-ups you can do!
¡Busca un lugar seguro y comprueba cuántas flexiones puedes hacer!

Deer High-jump El Salto de Altura del Ciervo

In order to move quickly through tall grass and shrubs, deer leap very high. They can jump up to 6 feet in the air!

Para moverse rápidamente en la maleza y entre los arbustos, los ciervos pegan brinco muy altos, a veces hasta 6 pies de altura.



How high can you jump?
¿Qué altura puedes alcanzar dando un salto?

Frog Hop El Salto de la Rana

Frogs use their strong back legs to hop away from predators such as snakes and herons.

Las ranas utilizan sus fuertes ancas traseras para saltar y escaparse de depredadores como las serpientes o las garzas.



Hop like a frog down the trail to escape a predator!
¡Salta como una rana a lo largo del camino para escaparte de un depredador!

Hawk Stance La Postura del Gavilán

To conserve heat and energy, hawks sometimes perch on one leg for hours at a time.

Para conservar el calor y la energía, los gavilanes a menudo se posan sobre una pata durante horas.



How long can you balance on one leg?
¿Cuánto tiempo puedes mantenerte en equilibrio sobre una pierna?

Grasshopper Long-jump El Salto de Longitud del Saltamontes

Grasshoppers can jump 20 times the length of their own body. If you could do that, you'd be able to jump 100 feet!

Los saltamontes pueden saltar 20 veces la longitud de su propio cuerpo. ¡Si tú pudieras hacer esto, podrías saltar una distancia de 100 pies!



Try a long-jump and see how far you can go!
¡Salta hacia delante y comprueba la distancia que alcanzas!

This brochure allows users of either language to learn words in English and Spanish.
If using both English and Spanish text, reduce the size of the word count to avoid overcrowding.

Cherokee Syllabary

☐ Tulip Poplar ᵇᵒ ᵇᵒᵒ



Growing straight and tall with light gray bark and a large broad leaf that looks like the tip has been bitten off, the tulip poplar is easy to find. The flowers of the tulip poplar are an important source of nectar for honeybees. Due to their large size, tulip poplar logs were often used by the Cherokee to make canoes. The Cherokee also used tulip poplar to heal wounds and cure digestive problems.

☐ Sourwood ᵒᵇᵏᵏᵒᵒᵒᵒᵒ



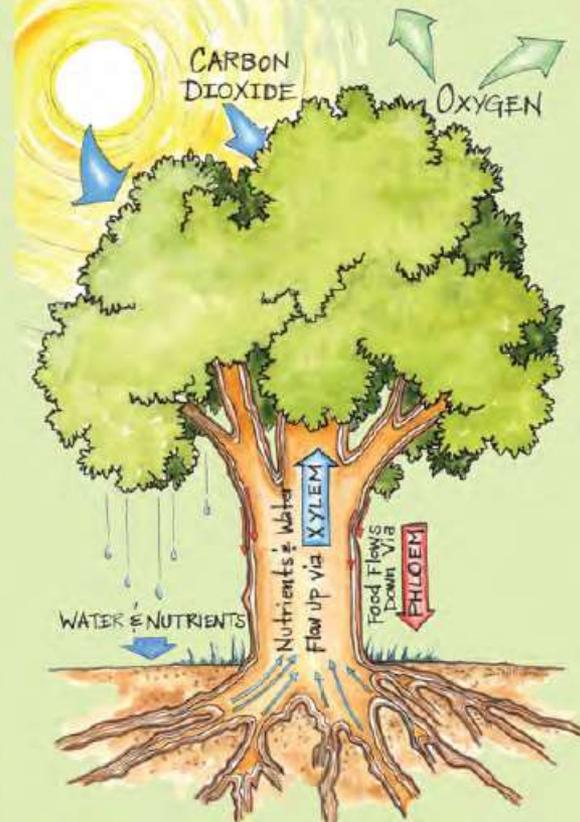
The sourwood tree has chunky bark and clusters of tiny white flowers in the spring. Sourwood bark was used by the Cherokee to treat diarrhea, and the straight twigs were used to make arrows. In one Cherokee legend, the daughter of the Sun was killed by a magic rattlesnake, and seven men retrieved her from the underworld by touching her with sourwood twigs and bringing her back to life.

☐ Rhododendron ᵒᵒᵒᵒ ᵒᵒᵒᵒᵒ



Rhododendron is a small evergreen tree that grows well in the shade. The dark green leaves are long and skinny with a smooth, leathery feel. In the summer, rhododendrons blossom with beautiful pink or white flowers. To treat joint pains, the Cherokee would scratch a patient's skin and then apply a tea made from rhododendron and similar plants.

The Need to Know How Trees Grow



Plants and trees have the ability to make their own food in a process known as photosynthesis. They do this by sucking water and nutrients from the soil up through their xylem and into their leaves. The water and nutrients are combined with carbon dioxide and sunlight to make a sugary food called glucose. This food then travels down through the phloem to the rest of the tree, so it can grow.

(Illustration by David Williams, Wright & Parks)

☐ Cherry Birch ᵒᵒ ᵒᵒᵒᵒᵒ ᵒᵒᵒᵒ



Cherry birch got its name because the bark of young trees looks like the bark of a cherry tree, with horizontal stripes called lenticels. The leaves have serrated (saw-toothed) edges, and the shoots have a wintery green scent. The Cherokee used birch to make a pleasant tasting tea that they drank for enjoyment and to settle the stomach.

☐ Sassafras ᵒᵒᵒᵒᵒᵒᵒ



The sassafras is a small tree that can be identified by its three distinct leaf shapes (entire, mittened and three-lobed). The fruits of the sassafras are eaten by many different birds. Sassafras tea was a favorite beverage of the Cherokee due to its great taste and the belief that it cleansed the blood. The bark and leaves were chewed and the spit produced was rubbed on spider bites.

☐ Red Maple ᵒᵒᵒ ᵒᵒᵒᵒᵒᵒᵒ ᵒᵒᵒᵒᵒᵒᵒ



Able to grow in almost any soil condition, the red maple is one of the most abundant and widespread trees in eastern North America. With red twigs, buds, flowers and seeds, it's easy to see how the red maple got its name. In the fall, the leaves also turn a brilliant red color. The Cherokee boiled the bark of the red maple and used it to treat eye problems.

This brochure teaches Cherokee children their culture's written language.
Work with translators to ensure accuracy.

Technology-Based Brochures

GPS / Geocache Brochures

Geocaching on the Emily B. Taylor Greenway

Are you ready for a geocache scavenger hunt? Plug in coordinates and discover just a few of the stories the greenway has to tell. Check each box when you find the cache and make an "x" on the map at your approximate location.

Toast of the Town

 N 36° 30.433, W 080° 37.190

Hint: Near the fence, 2 pins or more a quarter

In the late 1950's, Proctor Electric Company built what was then the largest toaster factory in the country! While digging the land for the building, a Native American burial ground was uncovered. Unlike today, there weren't any regulations for protecting Native American grave sites so treasure seekers collected everything from pottery to beads. Since the artifacts were from about 1400 AD, how old are they now?

$$\begin{array}{r} 20___ \text{ (current year)} \\ - 1400 \\ \hline = \end{array}$$

Look for the historic toaster factory across the river. It is the white building with blue letters!

Chair Rail

 N 36° 29.701, W 080° 37.161

Hint: Don't get TRIPed at searching

Because the railroad made it easier to transport goods, the areas lumber and woodworking industry evolved into several large furniture factories. Chairs, tables, pie safes and much more were built here. Look for sugar maple on the greenway, a tree that is used to make furniture because of its durable and fine-grained wood.

Sugar Maple



Veterans Memorial Park

 N 36° 30.861, W 080° 36.971

Hint: Don't forget to SIGN the log

In 1946, the American Legion and the Veterans of Foreign Wars purchased the 36 acre Taylor Farm to create Veterans Memorial Park. For over 65 years the annual county fair continues to be held here. What are your favorite things to do at a fair?

If you wander a little farther away from the geocache, you can find an army tank. What was the tank's nickname? _____



All Aboard!

 N 36° 29.887 W 080° 37.052

Hint: Have you seen the Thomas the Tank Engine MOVIE?



Mount Airy was a small town of about 300-400 people until the railroad came in 1888. The railroad made shipping goods a lot easier. Within a year, cotton factories, woolen mills, tobacco factories and much more were built here.

There was even a passenger train which made the train depot one of the most important buildings in town. Today, a different train track is used through town to transport various goods. Passenger train service ended when automobiles (cars) became popular. What is your favorite way to travel? _____



This brochure encourages the use of a GPS or smart phone to find specific locations on the trail. Use color-coded "sections" to associate the text blocks with regions of the trail.

GPS / Geocache Brochures

Geocaching on the Rockfish Valley TRACK Trail

Are you ready for a geocache scavenger hunt? Plug in the coordinates and discover just a few of the stories this trail has to tell. Check each box when you find the cache and make an "x" on the map at your approximate location. Then, use the information in each cache to answer the questions. **BONUS: Cache #5 has a take-home prize!**

2. The Rockfish River

 N 37° 52.790, W 78° 54.475

Hint: This cache is near (where the birds live?)

If you were a drop of water that fell into this river, you could travel 25 miles to the James River, drain into the Chesapeake Bay and eventually end up in the Atlantic Ocean. The gravel in this river makes that same trip, eroding along the way to form the sand at Virginia Beach! **Pick up a piece of gravel. Can you name one of the minerals in this rock that will form the sand at Virginia Beach?**



3. Basswood

 N 37° 52.785, W 78° 54.318

Hint: This cache is near the (basswood trees?)

Can you spot the basswood trees here? They have heart-shaped leaves and gray bark with furrows and flat ridges. In the spring, these trees bloom with beautiful and fragrant clusters of yellow-white flowers. **What are some things that humans use basswood trees for?**



1. Early Settlers

 N 37° 52.778, W 78° 54.502

Hint: This cache is near (the trailhead sign?)

One of the first known settlers of this area was Samuel Reid, for whom Reid's Creek is named. In 1805, Samuel sold the land to Hawes Coleman. Six generations of Hawes's families lived and farmed on this land for over 100 years.

Imagine it is 1805 and you just bought all the land you see around you. Where would you build your house?

What crops would you grow?



5. Lay of the Land

 Use clues from the previous geocaches to reveal these coordinates!

This bottomland was originally used for growing tobacco. Around 1880 the area was turned into an apple orchard containing over 10,000 apple trees. After that, it was a cattle farm and a vineyard. Now the land is used as pasture for various livestock, and as a place for people like you to visit, hike and make discoveries! **What was your favorite discovery today?**



4. Sassafras

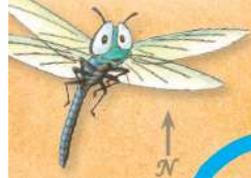
 N 37° 52.793, W 78° 54.185

Hint: This cache is near the (sassafras trees? picnic table?)

Look for sassafras trees along the trail. Sassafras trees are easy to identify because they have 3 different leaf shapes: entire, mittened, and three-lobed.



What are some things that humans use sassafras trees for?



This brochure encourages the use of a GPS or smart phone to find specific locations on the trail. *Users have to find the first four caches in order to get the coordinated for the 5th cache.*

Cell Phone Brochure

The Nature of Stone Bridge Trail



Are you ready for a nature adventure?
As you walk the loop, call in at each cell-phone stop and listen carefully for clues that will help you with the following activities.

17 Neighborhood Mammals

Thanks to the abundance of food and shelter here, many animals call Manassas National Battlefield home. Look for white-tailed deer browsing near the forest edge, and look for gray squirrels gathering seeds and nuts in the trees.

What do deer and squirrels do when they're scared?



23 A Great Place for Frogs

Do you notice anything different about this part of the trail? The elevation is lower, the plants and animals are different, and visitors have to walk on a boardwalk. This is because the area around you is a Piedmont Swamp Forest and contains many vernal pools! A vernal pool is a pond that is only full of water for part of the year. Since there isn't a year-round source of water, fish cannot live here, but amphibians can. Frogs and salamanders thrive in this temporary water habitat. What is the name of the small noisy frogs found here in the spring time?



15 Creepy Crawly Vines

Look for vines climbing up the trees near the wooden bridge. Three vines that grow here at Manassas are (1) wild grape, (2) virginia creeper, and (3) poison ivy.

Can you number them in the pictures here?



13 Your Watershed Address

You may know your street name, city and state, but do you know what watershed you live in? A watershed is an area of land that drains to a common point. If you were a raindrop that fell on this trail, you could drain into Bull Run, travel southeast into the Chesapeake Bay, and eventually end up in the Atlantic Ocean!



What is the name of the watershed you're standing in right now?

Draw what a dinosaur would look like on the Stone Bridge:

11 Where Dinosaurs Roamed

Did you know there used to be dinosaurs here? During certain times in the Earth's history, this whole area was under water, and an alligator-like dinosaur called *Tanytrachelos* lived here. In another period of the Earth's history, this area was a tropical forest, home to a dinosaur similar to the t-rex called *Kayentapus*.



Users call a 1-800 number and enter their "stop number" to listen to a message about that stop. Create activities that expand upon the interpretive recording they listened to.

Paddling Trails

Price Lake Canoe Trail

Discover Treasures on Price Lake

Paddle around the perimeter of Price Lake and visit these colored zones to discover just a few of the stories the lake has to tell.

Wild Waters

Rain and snow from the surrounding peaks flow into Boone Fork and other small creeks that drain into Price Lake. The flowing water from these streams brings valuable nutrients and oxygen to the lake, making these areas abundant with aquatic wildlife. Carefully paddle around the mouth of Boone Fork and the other creeks. Look for insects on the surface of the water and schools of fish swimming below. What was the coolest thing you found?

Boone Fork Creek



Active Beavers

Beavers here at the lake are always busy gnawing and cutting down trees. The wetland on the south end of the lake was created by beavers. They used logs and mud to block the stream to raise the water level so they could build their dome-like homes, called lodges, in the water. Can you find any signs of beavers?

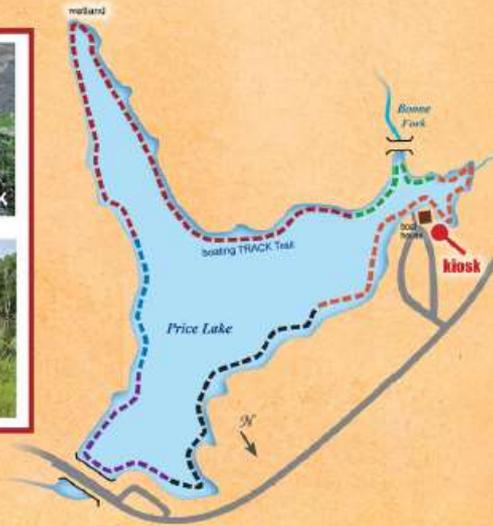


Chewed Trunk



Wetland

North American Beaver

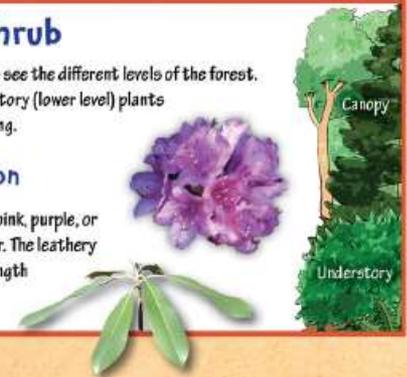


Evergreen Shrub

From a boat, you are able to see the different levels of the forest. Rhododendron is an understory (lower level) plants that stays green all year long.

Rhododendron

Rhododendron have bright pink, purple, or white flowers in the summer. The leathery oval leaves are about the length of an adult hand.



A Young Grandfather

Grandfather Mountain

While paddling along the lake's eastern shore, you get a unique view of Grandfather Mountain. Long ago, massive bodies of rock folded and compressed to form the Blue Ridge Mountains. In this area, older rock was actually pushed over younger rock. Over time, the older rocks on top eroded away, revealing the younger rocks beneath that form the distinct profile of Grandfather Mountain.



The Man behind the Park

Julian Price Dam

Julian Price was a nationally known insurance executive and civic leader. He originally bought this land (now called Julian Price Memorial Park) so that his employees would have a place to vacation. After Price's death in 1946, the estate was given to the National Park Service with an agreement that a lake would be made. Years later, the dam was built which created the 47-acre lake. From your boat you can get an excellent view of the dam at the northern end of the lake. What road goes over the dam?



Who's Swimming Underneath?

Fish

The lake is stocked with fish including all three trout species - brook, rainbow and brown. Brook trout is a large fish native to North Carolina. Brook trout only live in cool water and are powerful predators.



Brook Trout

Fish Food

Fish in Price Lake eat algae, zooplankton (microscopic creatures), insects and... other fish! The most common fish in the lake are golden shiners. These small fish were introduced to the lake to provide food for the bigger fish.



Golden Shiner

Similar to the GPS / Geocache brochure, the paddling brochure uses colored zones to connect content with specific regions around the lake.

Citizen Science Brochures

Carl Sandburg National Historic Site

West Side

What are the humidity and water & air temperatures here?
Are they different than from your measurements at the bridge?
Think about why it would be different. Is there sun, shade, fresh stream water, slow moving water?

Water: _____ °F
Air: _____ °F
Humidity: _____ %

Canopy Cover

The canopy is made up of the leaves and branches of trees that block your view of the sky. By measuring canopy density, we learn how differences in sunlight affect the ecosystem. **Look up!** Roll your brochure into a tube and look through. Which of these pictures looks most like what you see?

50% 
 25% 
 10% 

Tree Rings

Trees grow from the inside out and get wider and taller each year. You can measure the age of a tree by counting its rings. **How old was this tree?**
_____ Years Old

Compare the diameter of this stump to the size of a living tree of the same species (pine). **Guess the age of the living tree!**



pH (power of Hydrogen)

pH is a measure of hydrogen ion concentration. Low concentrations are acidic while high concentration are alkaline. A pH of '7' is considered balanced or neutral. A balanced pH level is very important for pond animals to live happy, healthy lives. **What is the pH of the pond?**
_____ pH

Water Quality

Water is great at dissolving things (think how much salt is dissolved in the ocean!). A water quality reading, measuring TDS (Total Dissolved Solids) shows how many particles are dissolved in the water. Anything lower than 300 is healthy. **What is the TDS level of the pond?**
_____ TDS



East Side

Take a few minutes to look for wildlife near the bridge. You might find fish, turtles, snakes, butterflies, or birds nearby. If they are out, perhaps they like the temperature today! Stop here to measure humidity, and water & air temperature:

Water: _____ °F
Air: _____ °F
Humidity: _____ %

Sit and Spy

A big part of being a scientist is making observations. Use your senses to spy on the pond ecosystem. What do you see? What do you hear? What do you smell? **Pretend you are Carl Sandburg and write a short poem based on your observations.**

SEE: _____
HEAR: _____
SMELL: _____

TITLE: _____

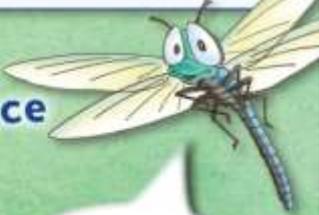
Whatever the Weather

Knowing when the data was collected and what the weather was like during collection helps give your findings meaning.

Date: _____ Time: _____

Weather:   

Remember to report your findings by registering on www.kidsinparks.com! Your data will help the park and you will earn free prizes!



Activity stations around the lake have scientific equipment visitors can use to take measurements and complete the activities in the brochure.



School-based Curriculum Brochures

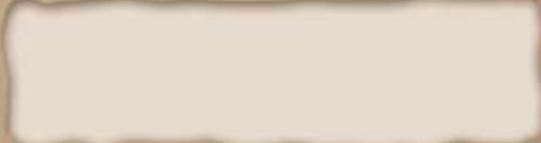
Soil Science – 1st Grade

Inspect the Clues

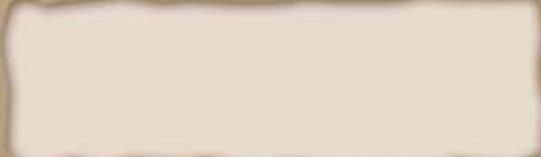
What pile was the biggest? Circle your answer.



What was the coolest thing you found? Draw it below.



Are there any plants growing nearby? Draw them below.



Can you uncover the hidden words scrambled below?



TRACK your hike at
kidsinparks.com
and get **FREE** prizes!



Thanks for joining us on the trail today!

Visit our website to find more TRACK Trail™ adventures near you!



Follow us on Facebook!



Kids in Parks, Founding Partners



Digging Detectives



Do you know what is hiding in the dirt beneath your feet? Grab this brochure and head out on the trail to discover the wonders beneath the surface!



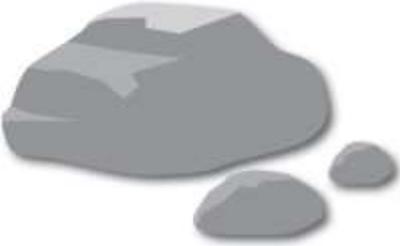
The Digging Detectives brochure aligns with NC curriculum standards for students in the 1st grade.

Soil Science – 1st Grade

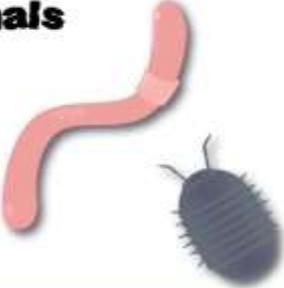
Soil Scatter
Soil may seem like plain ol' dirt but if we look closer, we can see it is made up of lots of different things. Rocks, leaves, animals, sticks, and other materials change the soil. Let's go scoop up some dirt and find out what's inside!
Put your scoop of soil on this brochure. Dig through and put the things you find in the box where they belong.

Put Scoop in this Box

Sticks


Rocks


Leaves


Animals


Other


Once you have your soil sorted, take a good look at it. Which pile is the biggest? What is the most interesting thing you found in your scoop? Are there plants growing in this soil nearby? Answer the questions on the back.

In this brochure, students analyze a scoop of soil and determine its contents.

Weather Science – 2nd Grade

Think About It!
Were your measurements at each station different from each other?
Why do you think that is?

TRACK your hike at
kidsinparks.com
and get **FREE** prizes!

Visit our website to find more TRACK Trail™ adventures near you!

Thanks for joining us on the trail today!

What's the Weather?

Being a weather scientist is fun!
Let's go on a hike and collect clues about the weather.

Take a Picture!
Put your camera/phone/tablet up to the guide post and take a picture. A picture can help you remember how different weather conditions looked!

Follow us on Facebook!

Kids in Parks Funding Partners:
Blue Ridge Parkway Foundation, Blue Cross BlueShield of North Carolina Foundation

Use this brochure and the tools on the trail to track the weather at your school.

2

The *What's the Weather* brochure aligns with NC curriculum standards for 2nd grade students, and teaches them how to use basic weather recording equipment.

Weather Science – 2nd Grade

Weather Toolkit

With a few simple tools we can discover the secrets of weather patterns. The measurements we take can even help us predict the weather!

Tools of the Trade

In your toolbox are some tools that measure different parts of weather.

- Thermometer**
A thermometer measures temperature. Temperature is measured in Fahrenheit.
- Barometer**
A barometer measures air pressure. Falling pressure can mean storms.
- Anemometer**
An anemometer measures wind speed. How fast is the wind blowing?
- Wind Vane**
A wind vane measures wind direction. Is the storm moving away from you?
- Rain Gauge**
A rain gauge measures precipitation. How much rain have we had recently?

Run the Numbers

Let's see how your measurements stack up against some all-time weather records.

Water freezes at 32°F. How much above or below freezing was your lowest **thermometer** reading?

The highest air pressure ever recorded in Asheville was 30.90 inHG in 1924. How close to the record was your highest **barometer** reading?

The highest ever North Carolina wind speed measured was about 121 miles per hour on Grandfather Mountain. How close was your highest **anemometer** reading today?

The most rain in a single day in North Carolina was 22.22 inches in Altapass in 1916. How much less rain did you get today in the most full **rain gauge**?

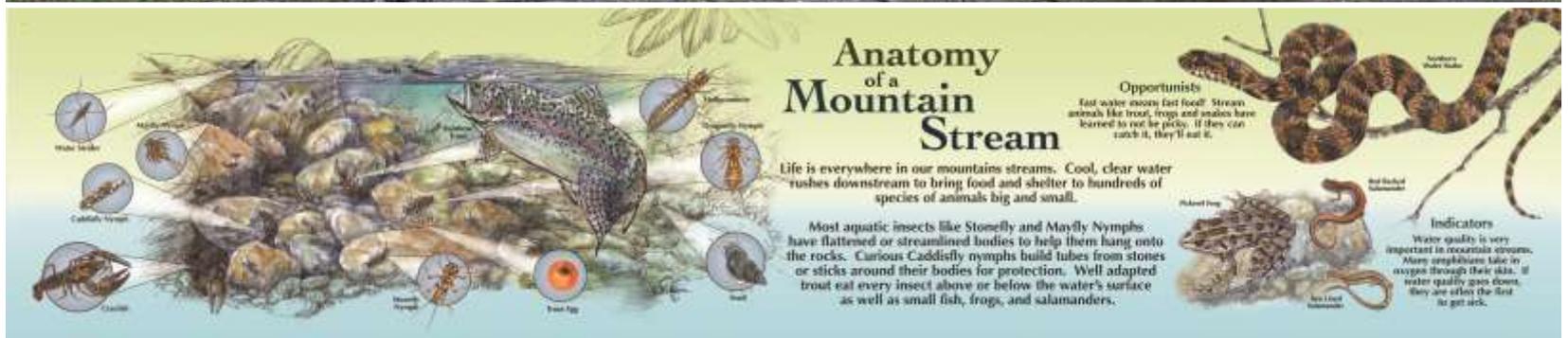
Take readings from the instruments at the stations and write down your findings.

T	T	T
B	B	B
A	A	A
W	W	W
R	R	R

Students visit three observation stations to record data, think about how their data stacks up against historic weather readings, and form hypotheses about their findings.

Signed Interpretive Trails

Aquatic Discovery Station



The Life in a Mountain Stream aquatic discovery station sign was installed on a unique aquatic-themed sign base.

Aquatic Discovery Station



The box at the station contains nets, buckets, magnifying lenses, and field guides that allow kids (of all ages) to explore and learn about critters that live in the stream.

Nature Trail
Disc Golf Course
Materials

Nature Trail Disc Golf Courses



Since disc golf is essentially a “hike with a frisbee”, Kids in Parks uses the sport to reach the teenage / young adult population. Their Nature Trail Disc Golf Courses are provide interpretive information on the tee-signs and scorecards, allowing the player to learn about nature while the play.

Interpretive Tee-Signs

Fort Hamby Nature Trail Disc Golf Course

1

BLUE
PAR 3
A – 290'
B – 350'
Road and Beyond – OB

Out of Bounds

Hole 2

WARNING:
Do not throw until cars and pedestrians are clear!

Tulip Poplar

Also known as yellow poplar, **Tulip Poplars** (*Liriodendron tulipifera*) are some of the largest and fastest-growing trees in the region. They grow straight and tall with a light gray bark and a large broad leaf that looks like the tip has been bitten off.

Tulip poplars are important trees for honey production. In the spring, honeybees collect pollen and nectar from their abundant tulip-shaped flowers.

Due to their large size and straight growth, tulip poplar trees are also important in the timber industry. The sturdy wood is used to make clapboard siding, furniture, pianos, organs and many other things.

PRO TIP: OVERHAND THROW

Overhand throws are primarily used to get out of trouble, but they can also be used from the middle of the fairway or off the tee-pad. To throw an overhand, grip the disc with your thumb on the inside rim ("thumb"), or with a sidearm grip ("tomahawk"). Throw the disc like you would a baseball or football, releasing the disc at 1:00-1:30 with the "thumb" grip, or at 10:30-11:00 with the "tomahawk" grip. The flight path of an overhand is like a corkscrew, twisting toward the direction of the top of the disc. With practice, overhands can be extremely accurate, allowing players to precisely spike their discs in particular locations.

The tee-signs have traditional rules and hole information on the left side. *An interpretive message and "pro-tip" are included on the right side.*

Greenway Bike Trails

Salem Lake Greenway

WELCOME TO THE SALEM LAKE BIKE TRACK TRAIL

The Salem Lake Bike TRACK Trail features nine stations around the seven mile lake loop. Each station has a sign with interpretive information about the plants and animals that make Salem Lake their home, as well as some information about the value of the lake and why it's important to keep it clean. You will also find tips to improve your biking skills. In addition, each sign contains a secret code letter at the bottom right corner. Kids can register their rides on the trail at kidsinparks.com to earn free bicycle gear. *Remember the code letters and un-scramble them to enter the code word on the website and win a special prize!*



Respect the Rules:

- Stay on the right side of trail.
- Ride in single file.
- Yield to pedestrians.
- Bike on Salem Lake Trail and not in the woods.

Salem Lake and the surrounding lands and streams draining into the lake are part of the Salem Lake **Watershed**. This watershed provides habitat for wildlife, recreation opportunities for people, and a water supply for the city of Winston-Salem.



kidsinparks.com

Cycling Tips: Pre-flight Check

Doing a quick equipment check before every ride can help save you time and injury. Be sure to check yourself, your gear and your bike to make sure you're ready to ride the trail.

HELMET

Be Smart. Protect your brain by wearing a properly fitted helmet. NC state law requires cyclists under age 16 to wear a helmet.

BRIGHT COLORS

Wearing bright clothing will make you more visible to others using the trail.

PADS AND GLOVES

Spills and crashes are a part of biking. Pads and gloves can help save your skin.

BRAKES AND BARS

Make sure your handlebars and headset are tight and that your brakes work!



WHEELS AND TIRES

Make sure your wheels are bolted on tight and that your tires are properly inflated (within the inflation range shown on the tire).

APPROPRIATE FOOTWEAR

Wear sturdy shoes that cover your toes.

The Salem Lake Bike TRACK Trail was made possible through partnerships formed between the Winston-Salem Recreation and Parks Department, the Blue Ridge Parkway Foundation's Kids in Parks program, and the generous support of the following private donors and businesses:

Kids in Parks Sponsoring partners



The Tossien Family

Ken's Bike Shop
Mock Orange Bikes



Blue Cross BlueShield of North Carolina
Sponsored by



Look for code letters **HERE**

The Salem Lake Greenway has 9 interpretive panels along the 7-mile long trail.

Interpretive Stops

TRIBUTARY TRAILS

A **tributary** is a small river or stream flowing into a larger river or lake. This stream is one of nine tributaries that drain into Salem Lake. Try to find them all as you ride around the trail!



A TRAIL TO THE OCEAN

Did you know the water flowing over the dam at Salem Lake could eventually wash up on the beaches of South Carolina? Here's how: Salem Lake drains into Salem Creek (A), which is a tributary of the Yadkin River (B). The Yadkin River flows into the Pee Dee River in Uwharrie National Forest (C). The Pee Dee River flows into the Great Pee Dee River in South Carolina (D), which drains into the Atlantic Ocean about 30 miles South of Myrtle Beach (E).

If you were a drop of water flowing over the dam at Salem Lake, you could travel 18 miles along Salem Creek, 82 miles along the Yadkin River, 30 miles along the Pee Dee River, and 140 miles along The Great Pee Dee River to reach the ocean. How many total river miles would it be to the ocean?*

$$18 + 82 + 30 + 140 = \underline{\hspace{2cm}} \text{ total river miles.}$$

*numbers are approximate



kidsinparks.com

Cycling Tips: Ups and Downs



RIDING UPHILL

When approaching an uphill section of trail, gear down and pedal hard to pick up speed. Keep your back straight and elbows bent. Try to avoid lifting yourself off of the seat or changing gear while riding uphill.



RIDING DOWNHILL

When approaching a downhill section of trail, move back on the seat, keep your elbows bent and your body low. Your legs should be relaxed and ready to absorb bumps. Use only the rear brake on downhills until you are comfortable enough with your balance to apply front and rear brakes evenly.



Code Letter T

To encourage kids to stop and read the signs, we put a “code letter” in the bottom corner. Kids can collect all the code letters, to unscramble the code word and earn a special prize.

WETLAND WONDERS

A **wetland** is an area of land that is saturated with water permanently or seasonally. There are many wetlands around Salem Lake. Notice the different grasses and plants growing in the wetlands. These plants and their roots help to absorb and filter water as it drains into Salem Lake. Wetlands also provide important habitat for animals such as dragonflies, frogs, and birds.

How many of the following animals and plants can you find in the wetlands around the lake?



The **blue dasher** is a common dragonfly that catches smaller insects flying in the wetlands.



Cattails provide a hiding place for animals and their roots help clean pollutants from the water.



The **green frog** lays its eggs in wetlands. Green frogs are eaten by fish, herons, and water snakes.



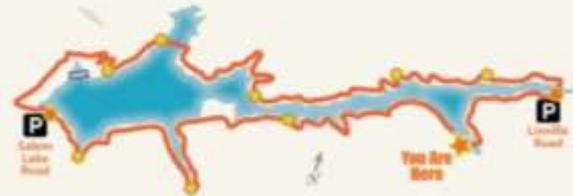
Water snakes are not venomous. They hunt for frogs and small fish in the wetlands.



Wood ducks are very shy and like to hide in wetlands. They dabble in the water for algae to eat.

Cycling Tips: Straight and Narrow

Don't end up in the water! Your bike will tend to go in the direction you are looking, so on narrow sections of trail it is important to look straight ahead and stay to the center if possible. When approaching a section of trail with obstacles such as rocks or logs, slow down and make sure you can see a clear path before proceeding. Mountain bikers call this "finding your line."



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Code Letter W

In addition to the interpretive information on each panel, we included a "cycling tip" to teach skills and encourage safety.

Pump TRACK Trails

Rocky Knob Bike Park



A pump track is a BMX style course with rollers, berms and other obstacles. The goal is to ride around the entire track without pedaling.

Rocky Knob Bike Park



The educational signs placed around the pump track teach bike handling skills. By learning proper bike skills, kids will be more successful and have more fun!

Skills Signs

MANUAL A ROLLER

"**MANUALLING A ROLLER**" is a technique used to create forward motion over rollers without pedaling and gain forward momentum.

1 Drive into the base of the roller by weighting your pedals.



2 Approach front of roller in good riding position. Unweight front wheel at top of roller.



3 Extend legs and lean back at the top of the roller with back tire on ground.



4 Continue through the roller in a wheelie, or manual, position.



5 Place your front tire on the downside of the second roller. Use your legs to soak up the top of the roller with your rear wheel.



ROLLER



kidsinparks.com

SCAN QR CODE
TO WATCH VIDEO



QR Codes link to YouTube video featuring a pro rider teaching the skill.

Skills Signs

PUMPING

"PUMPING" is the essential skill for making your bike travel through the entire course without pedaling. Pumping is the act of shifting your body weight and absorbing forces to increase your momentum.

1 Drive into the base of the roller by weighting your pedals.

2 Unweight your front wheel as you ride up the face of the roller.

3 As you cross over the top of the roller, unweight your entire bike.

4 Then quickly weight your bike and push down as you ride down the back of the roller.

5 Put the front tire on the ground.



kidsinparks.com

SCAN OR CODE
TO WATCH VIDEO



Being designed for teenagers, the graphics were designed to be a little more "sporty".

TRACK Rx

(Our Version of Park Rx)

TRACK Rx – Pediatrician Displays



Kids in Parks has installed “pediatrician office trailheads” in the lobbies of doctor offices as part of the Park Rx movement.

TRACK Rx Brochure



Rx _____

- Play in your backyard
- Explore a trail or green space near home
- Go for a run or ride a bike
- Play a sport or other game outside
- Go for a hike on a TRACK Trail



Rx Code: TRACKRX

After you complete your adventure, log in to www.KidsInParks.com and register the Rx code above to earn a free prize in the mail. Then, visit other TRACK Trail locations and log your adventures online to earn even more free prizes!

TRACK your hike at
kidsinparks.com
and get **FREE** prizes!



Thanks for joining us on the trail today! Visit our website to find more TRACK Trail™ adventures near you!

The next generation of stewards will help preserve the world's plants, animals, natural lands and our heritage. What will you do to make a difference?

Kids in Parks...
Providing a network of fun-filled adventures that get kids and families active outdoors and connected to nature.



Kids in Parks Founding Partners:



Spending time outdoors is good for you. When you go for a walk, ride a bike, or simply play in the yard, you get a lot of health benefits. That's why doctors all over the country have begun prescribing nature to kids... it's Better than medicine!



Hi kids, I'm Dr. TRACK... this is my pal, KIP.

KIP and I created a network of trails designed for kids and families called TRACK Trails. Each trail has self-guided adventures you can do to make discoveries and have fun! This is our TRACK Rx Adventure. You can do it in your backyard, schoolyard, park, or along an official TRACK Trail. It combines several of our trail brochures into one.

We created a TRACK Rx brochure that is housed in the Pediatrician Display.

TRACK Rx Brochure

Cognitive Health: Train Your Brain
When you spend time outside, you see, hear and smell things. You make discoveries: a waterfall, a bird singing a song, or wildflowers blooming... and you improve your cognitive health! (you become smarter!)

Doctors know that spending time in nature can help your muscles grow stronger, your brain become smarter, and make you feel better about yourself. This brochure has activities to strengthen all three and show you how all three areas of health are connected!

Emotional Health: Serene Green
Studies show that simply viewing pictures of nature can reduce stress levels and improve emotional health... Imagine what spending time outdoors can do!

Let's make some discoveries about flowers!
 Find a flower... Smell it. Look at it closely. Can you find the different parts of the flower?

White Oak

Red Maple

White Pine

Physical Health: Active Lifestyle
When you go for a walk, hike, bike ride, or run around, your heart beats faster, your muscles work, and your body sweats... and you improve your physical health!
 During your adventure, discover how athletic animals train by doing a few of their exercises:

Hummingbird Hand-swings

Look for ruby-throated hummingbirds feeding on flowers around woodland edges and fields. Hummingbirds flap their wings over 50 times per second!
 How fast can you flap your arms?

Cottontail Dash

Watch for cottontail rabbits feeding in grassy areas. Rabbits are a favorite food of coyotes, foxes and hawks. When being chased, rabbits sprint in a fast zig-zag pattern until they find cover.
 Sprint down the trail in a zig-zag until you find a large tree to hide behind.

The brochure provides fun activities that teach kids how spending time in nature improves their overall health.

Park Rx – Prescription Pads

TRACK
R_x *Outdoor Activity in Nature*

Patient's name: _____

Today's Date: _____ Recommended Dosage: _____

Play outside

Play in a park

Go for a walk, run or bike ride

Play an active game or sport with friends

Go for a hike on a TRACK Trail

Other: _____

Health professional's signature: _____

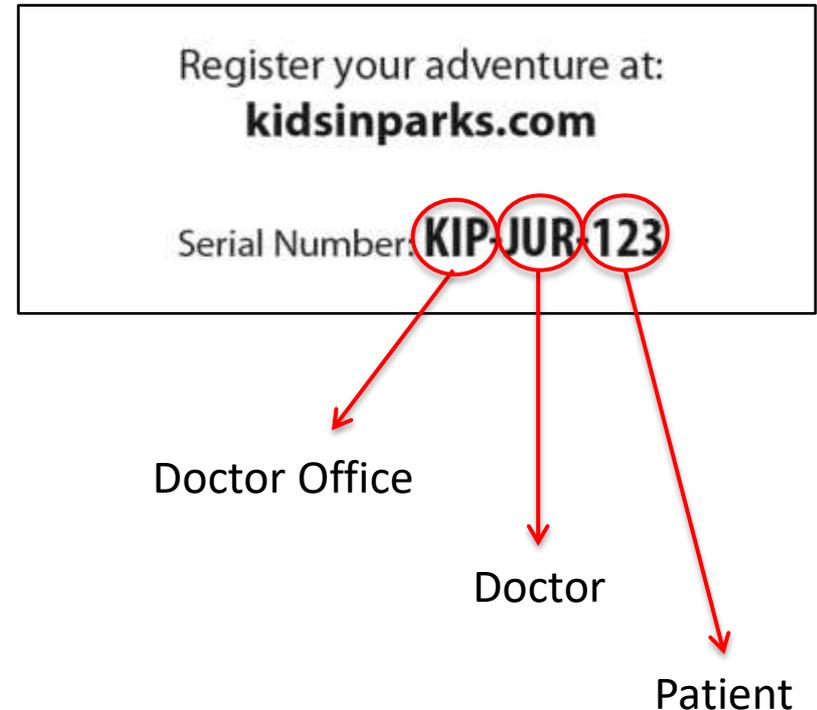
Parent/child signature: _____

Unlimited refills!

Jason Urroz, Director
Kids in Parks
322 Gashes Creek Rd.
Asheville, NC 28803
Ph: (828)505-8495

Register your adventure at:
kidsinparks.com

Serial Number: **KIP-JUR-123**



Our prescription pad allows doctors to prescribe outdoor activity and TRACK Trails to their patients. The unique 9-digit serial number allows us to track the fulfillment of the Rx by the patients, and report back to the doctor regarding their patient's fulfillment.

National ParkRx Day



Getting pediatricians to hike the trails with their patients and park staff in a “Walk with a Doc” style program has proven to be very successful.

REVIEW

Questions?



Contact Us



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